

# MEDICAL EXAMINER JURISDICTION, CAUSE AND MANNER OF DEATH, AND DEATH CERTIFICATION

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https://www.tn.gov/health/section/OSCME

# Accuracy and Timeliness in Death Certification

- The death certificate must be completed before final disposition of the body; delay in completing and signing may interfere with funeral arrangements
- Significant implications in death benefits paid to families (for example, workers' compensation claims; double indemnity payments in cases of accidental death)
- The death certificate is the source of information for regional, state, and national mortality data, which in turn is used for funding and directing research and public health efforts



# Jurisdiction: Who Should Complete and Sign the Death Certificate?

- In most natural deaths, a treating physician is responsible for the medical certification of death, including deaths which occur outside of health care facilities or in which the physician is not physically present
- The medical examiner may assume jurisdiction only under certain circumstances
- Non-medical examiner cases will be signed by "the physician in charge of the patient's care for the illness or condition that resulted in death...In the absence of the physician, the certificate may be completed and signed by another physician designated by the physician" (TCA 68-3-502)
- Certifier immune from civil suit if completed in good faith; failure to do so may result in discipline by Board of Medical Examiners



#### Medical Examiner Certification of Death

- The county medical examiner for the county in which the death occurred should be notified in "any case involving a homicide, a suspected homicide, a suicide, or a violent, unnatural, or suspicious death" (TCA 38-7-106)
- Examples include:
  - Deaths due or related to acute overdose of legal or illegal drugs and/or alcohol
  - Deaths due to drowning
  - Deaths due to thermal or chemical burns, or smoke inhalation
  - Death by disease, injury, or toxicity resulting from employment
  - Deaths due to hypo- or hyperthermia
- In such cases, the county medical examiner "shall investigate and certify the death certificate" (TCA 68-3-502-d)



# Medical Examiner Certification of Death: Delayed Non-natural Deaths

- If any external force or entity is related in any way to death, the manner of death cannot be considered natural
- All non-natural deaths fall under medical examiner jurisdiction
  - Jurisdiction is based on the county in which death was pronounced
- The interval of time elapsed between injury and death is irrelevant
- Examples of delayed deaths include:
  - An elderly person who dies months after becoming bedridden after a fall;
  - A person who dies of pneumonia due to paraplegia resulting from a car accident years before;
  - A person who dies a week after an anoxic brain injury caused by choking on food



# Other Deaths Which Should Be Reported to the Medical Examiner

- Deaths of prisoners or those in state custody
- Sudden, unexpected deaths of infants and children
- Deaths of adults lacking a medical diagnosis which could reasonably result in death
- Deaths due to hypo- or hyperthermia
- Death of a fetus greater than 20 weeks gestation or weighing at least 350 grams resulting from maternal trauma or acute drug use
- Deaths due to suspected abuse or neglect of residents of long-term care facilities
- Unidentified human remains



# Deaths Which Must Be Reported to the County Medical Examiner

Deaths due to or related to any type of violence or trauma

Deaths due or related to acute overdose of legal or illegal drugs and/or alcohol

Sudden, unexpected deaths of infants and children

Deaths of adults lacking a medical diagnosis which could reasonably result in death

Deaths due to drowning

Deaths due to thermal or chemical burns, or smoke inhalation

Death by disease, injury, or toxicity resulting from employment

Deaths of prisoners

Deaths due to hypo- or hyperthermia

Death of a fetus greater than 20 weeks gestation or weighing at least 350 grams resulting from maternal trauma or acute drug use

Deaths due or related to any of the above or any other non-natural event, regardless of the time elapsed between the injury and death. If death is related in any way to a discrete injury or poisoning event, the period of time between the non-natural event and the death is irrelevant. Examples of delayed deaths include:

- An elderly person who dies months after becoming bedridden from a fall
- A person who dies of urosepsis due to paraplegia following a car crash years before
- A person who develops pneumonia as the result of anoxic brain injury after choking on food



## Physician Certifiers

- One of the responsibilities of a primary-care physician is to provide death certification for his or her patients who die of natural, diagnosed causes, even if the physician was not present at the time of death
  - If the patient has not been seen by the physician in the four months leading up to death, the physician may still certify the death, or may refer case to the county medical examiner
- Other physicians knowledgeable with patient history may also certify deaths
  - Examples: cardiologist, oncologist, emergency room physician



#### When and Where Death Occurs

- T.C.A. 68-3-501 (Uniform Determination of Death Act): death occurs when either:
  - Irreversible cessation of cardiac and respiratory systems occurs; or
  - Irreversible cessation of function of entire brain occurs
- T.C.A. 68-3-502: when a body is discovered dead, the place, date, and time of death are when and where the body was found



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PHYSICIAN OR MEDICAL EXAMINER	26b. MEDICAL EXAMINER - 27a. SIGNATURE OF CERTIFIER			LICENSE NUMBER	27c. DATE SIGNED (Mon	
EXECUTING CAUSE OF DEATH MUST COMPLETE	•			NAME AND ADDRESS	 	
AND SIGN WITHIN 48 HOURS.	28. PART I. Enter the <u>chain of events</u> respiratory arrest, or ventricular fibril IMMEDIATE CAUSE (Final disease or condition				ninal events such as cardiac arrest,	Approximate interval: Onset to death
MEDICAL CERTIFICATION	resulting in death)		Due to	(or as a consequence of)		-
	Sequentially list conditions, if any, leading to the cause listed on line a. Enter the UNDERLYING CAUSE (disease or injury that initiated the events resulting			or as a consequence of):		
	in death) LAST PART II. Other significant conditions co	ontributing to death but not result	ting in the under	lying cause given in PART I.	29a. WAS AN AUTOPSY P  Yes   29b. WERE AUTOPSY FIN	NO DINGS AVAILABLE: TO
	OO MANINER OF REATH	24 DID TOPACCO I	ICE	22 IE EEMALE:	COMPLETE THE CAUSE O	OF DEATH? ☐Yes ☐No
	30. MANNER OF DEATH  Natural Homicide Accident Pending Investigation Suicide Could not be determined.	N1-	D DEATH? bably	32. IF FEMALE:  Not pregnant within past year  Pregnant at time of death  Not pregnant, but pregnant w	1 year befo	nt, but pregnant 43 days to re death f pregnant within the past year
	33. IF TRANSPORTATION INJURY, SPECIFY:	34a. DATE OF INJURY	34b. TIME C		PLACE OF INJURY –at home, farm, st	reet, factory, office, building, etc.

34e. DESCRIBE HOW INJURY OCCURRED

Yes No



Driver/Operator Passenger

Pedestrian Other (Specify) 34f. LOCATION OF INJURY (Street and Number, City or Town, State)

#### **Medical Certification of Death**

26. CERTIFIER (Check only one):							
26a. PHYSICIAN -To the best of my knowledge, death occurred at the da	ate and place, and due to the cause(s) and manner state	d.					
26b. MEDICAL EXAMINER - On the basis of examination, and/or inves	26b. MEDICAL EXAMINER - On the basis of examination, and/or investigation, in my opinion, death occurred at the date, and place, and due to the cause(s) and manner stated.						
27a. SIGNATURE OF CERTIFIER	27b. LICENSE NUMBER	27c. DATE SIGNED (Month, Day, Year)					
<b>•</b>	27d. NAME AND ADDRESS						

- 26 a. Check "Physician" or "Medical Examiner"
- 27 a. Sign
- 27 b. Enter number of Tennessee license to practice medicine
  - Only those with a Tennessee M.D. or D.O. license may certify death; in patients treated by nurse practitioners or physicians' assistants, the supervisory physician is responsible for certification of natural deaths
- 27 c. Date signed
- 27 d. Physician's name and address



#### Part I: Cause of Death Statement

	<u>nts</u> (diseases, injuries, or complications) that directly caused the death. DO NOT enter terminal events such as cardiac arrest, fibrillation without showing the etiology. Enter only one cause on a line.	Approximate interval: Onset to death
IMMEDIATE CAUSE		
(Final disease or condition resulting in death)	a	
Sequentially list conditions, if any, leading to the cause	b	
listed on line a. Enter the	Due to (or as a consequence of):  c	
(disease or injury that initiated the events resulting	Due to (or as a consequence of): d.	
in death) LAST		

- All lines do not have to be used
- List, in sequential order, conditions responsible for death:
  - ONE CONDITION per line
  - AVOID ABBREVIATIONS
  - IMMEDIATE CAUSE OF DEATH FIRST, UNDERLYING CAUSE OF DEATH LAST: THE BOTTOM LINE IS THE BOTTOM LINE

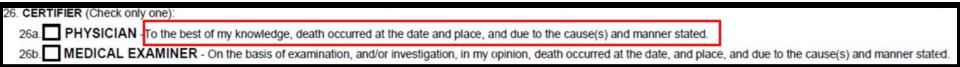


#### Cause of Death Statement

- Cause of death is defined as "the <u>anatomic</u> disease or injury that <u>initiated</u> the train of morbid events leading directly to death"
- The cause of death statement on the death certificate represents the *medical opinion* of the certifier
- More likely than not



# "To the best of my knowledge..."



 Tennessee code grants civil immunity to certifying physicians acting in good faith (TCA 68-3-513)



56 year old with hypertension suffers a hemorrhagic stroke

		liseases, injuries, or complications) that directly caused the death. DO NOT enter terminal events such as cardiac arrest, ation without showing the etiology. Enter only one cause on a line.
IMMEDIATE CAUSE (Final disease or condition	• a.	HEMORRHAGIC CEREBROVASCULAR ACCIDENT
resulting in death)		Due to (or as a consequence of)
Sequentially list conditions,	b.	ESSENTIAL HYPERTENSION
if any, leading to the cause listed on line a. Enter the		Due to (or as a consequence of):
UNDERLYING CAUSE	C.	
(disease or injury that		Due to (or as a consequence of):
initiated the events resulting in death) LAST	_ d	
iii dealii) LAST		



43 year old receives a bone marrow transplant and develops *C. difficile* colitis

28. PART I. Enter the chain of events (diseases, injuries, or complications) that directly caused the death. DO NOT enter terminal events such as cardiac arrest, respiratory arrest, or ventricular fibrillation without showing the etiology. Enter only one cause on a line.

IMMEDIATE CAUSE (Final disease or condition resulting in death)

Sequentially list conditions, if any, leading to the cause listed on line a. Enter the UNDERLYING CAUSE (disease or injury that initiated the events resulting in death) LAST

CLOSTRIDIUM DIFFICILE COLITIS

Due to (or as a consequence of)

Due to (or as a consequence of):

c. BONE MARROW TRANSPLANTATION

Due to (or as a consequence of):

d. ACUTE MYELOGENOUS LEUKEMIA



- It may not be possible to identify the precise physiologic sequence (mechanism) leading up to death
- In such cases, the known diagnosis which could reasonably account for death should be listed as the cause
- Example: patient in hospice with metastatic lung cancer

	I I
	<u>rents</u> (diseases, injuries, or complications) that directly caused the death. DO NOT enter terminal events such as cardiac arrest, ir fibrillation without showing the etiology. Enter only one cause on a line.
IMMEDIATE CAUSE (Final disease or condition	► a. ADENOCARCINOMA OF LUNG WITH METASTASES TO BRAIN
resulting in death)	Due to (or as a consequence of)
Sequentially list conditions,	<b>f</b> b
if any, leading to the cause listed on line a. Enter the	Due to (or as a consequence of):
UNDERLYING CAUSE	C
(disease or injury that	Due to (or as a consequence of):
initiated the events resulting	d
in death) <b>LAST</b>	



- It is acceptable to use the terms "probable", "possible", or "suspected"
- Example: 86 year-old with 7 cm abdominal aortic aneurysm found dead at home with distended abdomen

		diseases, injuries, or complications) that directly caused the death. DO NOT enter terminal events such as cardiac arrest, ation without showing the etiology. Enter only one cause on a line.
IMMEDIATE CAUSE (Final disease or condition	► a.	PROBABLE RUPTURED AORTIC ANEURYSM
resulting in death)	_	Due to (or as a consequence of)
Sequentially list conditions,	b.	ATHEROSCLEROTIC CARDIOVASCULAR DISEASE
if any, leading to the cause listed on line a. Enter the		Due to (or as a consequence of):
UNDERLYING CAUSE	C.	
(disease or injury that		Due to (or as a consequence of):
	d.	
(disease or injury that initiated the events resulting in death) LAST	d.	Due to (or as a consequence of):



## **Aspiration Pneumonia**

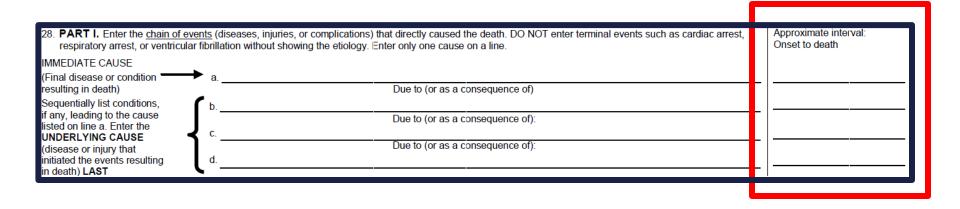
- Most cases of aspiration pneumonia occur in neurologically compromised patients
- The underlying disease process causing the impairment should be listed as the cause of death

		liseases, injuries, or complications) that directly caused the death. DO NOT enter terminal events such as cardiac arrest, ation without showing the etiology. Enter only one cause on a line.
IMMEDIATE CAUSE (Final disease or condition	➤ a.	ASPIRATION PNEUMONIA
resulting in death)		Due to (or as a consequence of)
Sequentially list conditions,	<b>b</b> .	AMYOTROPHIC LATERAL SCLEROSIS
if any, leading to the cause		Due to (or as a consequence of):
listed on line a. Enter the UNDERLYING CAUSE	C.	
(disease or injury that		Due to (or as a consequence of):
initiated the events resulting	d.	
in death) LAST	_	



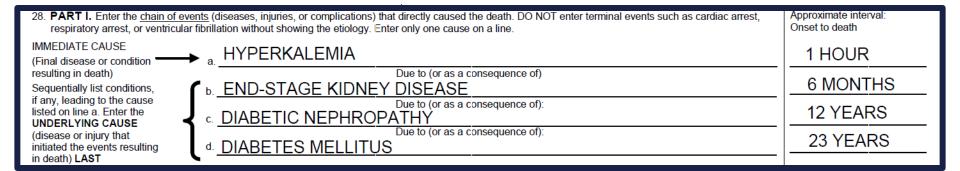
#### Interval: Onset to Death

- Underlying cause of death is listed last
- Shortest interval at top, longest at bottom, in sequential order





# Interval: Onset to Death: Examples



	events (diseases, injuries, or complications) that directly caused the death. DO NOT enter terminal events such as cardiac arrest, ar fibrillation without showing the etiology. Enter only one cause on a line.	Approximate interval: Onset to death
IMMEDIATE CAUSE (Final disease or condition	→ a. VENTRICULAR FIBRILLATION	SECONDS
resulting in death) Sequentially list conditions,	Due to (or as a consequence of)  b. CORONARY ARTERY THROMBOSIS	HOURS
if any, leading to the cause listed on line a. Enter the UNDERLYING CAUSE	Due to (or as a consequence of):  c. ATHEROSCLEROTIC CARDIOVASCULAR DISEASE	YEARS
(disease or injury that initiated the events resulting	Due to (or as a consequence of): d.	
in death) LAST		



# Part II: Conditions Contributing to Death

			s, injuries, or complications) that directly caused the death. DO NOT enter terminal events such as cardiac arres ithout showing the etiology. Enter only one cause on a line.	Approximate interval: Onset to death
IMMEDIATE CAUSE				
(Final disease or condition	→	a		
resulting in death)			Due to (or as a consequence of)	
Sequentially list conditions,		b		
if any, leading to the cause listed on line a. Enter the UNDERLYING CAUSE	Į	c.	Due to (or as a consequence of):	_
(disease or injury that initiated the events resulting	1	d.	Due to (or as a consequence of):	
in death) LAST				<del></del>
PART II. Other significant cond	ditions	contributin	ng to death but not resulting in the underlying cause given in PART I.  29a WAS AN AUTOP Yes	No
				Y FINDINGS AVAILABLE: TO JSE OF DEATH? ☐Yes ☐No



# Part II: Contributory Causes of Death

- Conditions which contributed to but did not directly lead to death
- May list more than one contributory cause of death
- 75 year-old with hypertension, diabetes, and chronic obstructive pulmonary disease found dead at home without antecedent complaints

		diseases, injuries, or complications) that directly caused the death. DO NOT enter terminal ever ation without showing the etiology. Enter only one cause on a line.	nts such as cardiac arrest,	Approximate interval Onset to death	i.
IMMEDIATE CAUSE (Final disease or condition resulting in death)	► a.	HYPERTENSIVE CARDIOVASCULAR DISEASE  Due to (or as a consequence of)		YEARS	
Sequentially list conditions, if any, leading to the cause listed on line a. Enter the UNDERLYING CAUSE (disease or injury that initiated the events resulting in death) LAST	b. c. d.	Due to (or as a consequence of):  Due to (or as a consequence of):			
•		ntributing to death but not resulting in the underlying cause given in PART I.  CHRONIC OBSTRUCTIVE PULMONARY DISEASE	29a. WAS AN AUTOPSY PE  Yes No. 29b. WERE AUTOPSY FIND COMPLETE THE CAUSE OF	INGS AVAILABLE: T	



#### Cause versus Mechanism of Death

- Recall that the *cause* of death is the *anatomic* disease or injury that initiated the train of events leading to death
- *Mechanisms* of death are non-specific *physiologic* processes
- Mechanisms of death should not be listed as the sole or underlying cause of death
- Examples: exsanguination, respiratory arrest, arrhythmia, asphyxia, anoxic brain injury, metabolic acidosis



# Non-specific Mechanisms of Death: Examples: More Information is Required

	ents (diseases, injuries, or complications) that directly caused the death. DO NOT enter terminal events such as ca fibrillation without showing the etiology. Enter only one cause on a line.	rdiac arrest,
IMMEDIATE CAUSE (Final disease or condition	a. CARDIOPULMONARY ARREST	
resulting in death)	Due to (or as a consequence of)	
Sequentially list conditions,	b.	
if any, leading to the cause listed on line a. Enter the UNDERLYING CAUSE	Due to (or as a consequence of): c.	
(disease or injury that initiated the events resulting in death) LAST	Due to (or as a consequence of):  d.	

28. <b>PART I.</b> Enter the chain of events (diseases, injuries, or complications) that directly caused the death. DO NOT enter terminal events such as cardiac arrest, respiratory arrest, or ventricular fibrillation without showing the etiology. Enter only one cause on a line.				
IMMEDIATE CAUSE (Final disease or condition	LETHAL DYSRHYTHMIA			
resulting in death)	Due to (or as a consequence of)			
Sequentially list conditions,	b. <u>VENTRICULAR FIBRILLATION</u>			
if any, leading to the cause listed on line a. Enter the UNDERLYING CAUSE	Due to (or as a consequence of): c. HYPERKALEMIA			
(disease or injury that initiated the events resulting	Due to (or as a consequence of):  d. DEHYDRATION			
in death) LAST				



# CDC: Additional Information Required

Abscess

Abdominal hemorrhage

Adhesions

Adult respiratory distress syndrome

Acute myocardial infarction

Altered mental status

Anemia

Anoxia/anoxic encephalopathy

Arrhythmia Ascites Aspiration Atrial fibrillation

Bacteremia Bedridden

Biliary obstruction Bowel obstruction

Brain injury

Brain stem herniation

Carcinogenesis Carcinomatosis Cardiac arrest Cardiac dysrhythmia

Cardiomyopathy

Cardiopulmonary arrest

Cellulitis

Cerebral edema

Cerebrovascular accident

Cerebellar tonsillar herniation

Chronic bedridden state

Cirrhosis Coagulopathy

Compression fracture Congestive heart failure

Convulsions Decubiti Dehydration

Dementia (when not otherwise

specified) Diarrhea

Disseminated intravascular

coagulopathy Dysrhythmia

End stage liver disease End stage renal disease Epidural hematoma Exsanguination Failure to thrive

Fracture Gangrene

Gastrointestinal hemorrhage

Heart failure Hemothorax Hepatic failure

Hepatitis

Hepatorenal syndrome

Hyperglycemia Hyperkalemia Hypovolemic shock Hyponatremia Hypotension

Immunosuppression Increase intracranial pressure

Intracranial hemorrhage

Malnutrition

Metabolic encephalopathy

Multiorgan failure

Multisystem organ failure Myocardial infarction

Necrotizing soft tissue infection

Old age

Open (or closed) head injury

Pancytopenia Paralysis

Perforated gallbladder

Peritonitis
Pleural effusions
Pneumonia
Pulmonary arrest

Pulmonary edema Pulmonary embolism

Pulmonary insufficiency

Renal failure Respiratory arrest

Seizures Septic shock Shock

Starvation

Subdural hematoma

Subarachnoid hemorrhage

Sudden death
Thrombocytopenia
Uncal herniation
Urinary tract infection
Ventricular fibrillation
Ventricular tachycardia
Volume depletion

Source: CDC: Physicians' Handbook on Medical Certification of Death



### Manner of Death

<ol> <li>PART I. Enter the <u>chain of e</u> respiratory arrest, or ventricu</li> </ol>	Approximate interval: Onset to death			
IMMEDIATE CAUSE (Final disease or condition	<b>→</b> 。			
resulting in death)	a	Due to (or as a consequence of)		
Sequentially list conditions, if any, leading to the cause listed on line a. Enter the UNDERLYING CAUSE (disease or injury that initiated the events resulting	<b>J</b> b	Due to (or as a consequence of):		
	d	Due to (or as a consequence of):		
in death) LAST PART II. <u>Other significant condi</u>	itions contributir	ng to death but not resulting in the underlying cause given in PART I.	29a WAS AN AUTOPSY PE	
		<u> </u>	29b. WERE AUTOPSY FIND COMPLETE THE CAUSE O	DINGS AVAILABLE: TO
30. MANNER OF DEATH  Natural Homicide  Accident Pending Investigation  Suicide Could not be determined		31. DID TOBACCO USE CONTRIBUTE TO DEATH?  Yes Probably No Unknown  32. IF FEMALE: Not pregnant within past year Pregnant at time of death Not pregnant, but pregnant within 42	1 year befor	nt, but pregnant 43 days to e death pregnant within the past year



#### Manners of Death: Natural

- If a discrete injury or poisoning event contributed in any way to death, regardless of time elapsed between the event and death, manner of death cannot be considered to be natural
- All non-natural deaths are to be reported to the medical examiner of the county in which death occurred
- Only one manner of death may be selected
- The non-medical examiner certifier of death should only choose "Natural" as a manner of death



# Manners of Death: Non-Natural; Reserved for County Medical Examiner

- Accident: death due to injury or poisoning, regardless of time elapsed between inciting event and death, not due to an intentional or volitional act
- Homicide: death resulting from a volitional act by another person intended to cause fear, harm, or death
- **Suicide:** death resulting from injury or poisoning as a result of an intentional self-inflicted act committed to cause self-harm
- **Could not be determined:** either too much or too little information to determine manner of death to a reasonable degree of medical certainty



## Manners of Death: Examples

- 83 year old falls at home; admitted to hospital for ORIF of left femur; hospital course complicated by pneumonia, MI, ARF; dies two months later with mucus plug of trach
  - Manner of death: accident; cause of death: complications of left femur fracture
  - Apply the "but-for" principle: "but-for" the fall, the abovelisted complications would not have occurred
  - Time elapsed between injury and death is irrelevant
  - DID NOT RETURN TO PRE-INJURY LEVEL OF FUNCTION



## Manners of Death: Examples

- 53 year-old paraplegic dies of urosepsis
  - Paraplegia is due to ruptured spinal AVM: manner of death is natural
  - Paraplegia is due to injuries sustained in MVA ten years prior to death: manner of death is accident
  - Paraplegia is due to self-inflicted gunshot wound to chest three years prior to death: manner of death is suicide
  - Paraplegia is due to gunshot wound to spine after decedent discovered in flagrante delicto with a spouse not his own thirty years ago: manner of death is homicide



# Manners of Death: Therapy-Related Deaths

- Deaths occurring as the result of a foreseeable complication of accepted therapy for natural disease are classified as **natural**
  - Example: Stevens-Johnson syndrome after Bactrim therapy; bone marrow suppression due to chemotherapy
- Deaths occurring as the result of improper use of medical equipment or of equipment malfunction are classified as accident



# **Autopsy?**

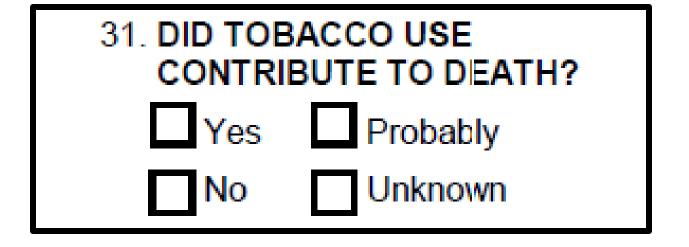
<ol> <li>PART I. Enter the <u>chain of e</u> respiratory arrest, or ventricu</li> </ol>	Approximate interval: Onset to death				
IMMEDIATE CAUSE (Final disease or condition resulting in death)	→ a	Due to (or as a consequence of)			
Sequentially list conditions, if any, leading to the cause listed on line a. Enter the UNDERLYING CAUSE (disease or injury that initiated the events resulting in death) LAST	b c d	Due to (or as a consequence of):  Due to (or as a consequence of):			
in death) LAST PART II. Other significant condi	itions contributing to deal	th but not resulting in the underlying cause given in PART I.	29a· WAS AN AUTOPSY P Yes 1 29b· WERE AUTOPSY FIN	No DINGS AVAI <u>LA</u> BLE: <u>TO</u>	



28. <b>PART I.</b> Enter the <u>chain of ev</u>	vents (dise	eases, injuries, or complications) th	at directly cau	used the death. DO NOT (	enter terminal ever	nts such as cardiac arrest,	Approximate interv	al:
. , ,	ar fibrillatio	on without showing the etiology. En	ter only one c	cause on a line.			Onset to death	
IMMEDIATE CAUSE	_							
(Final disease or condition resulting in death)	<b>→</b> a		Due to (or a	as a consequence of)				
Sequentially list conditions,	C h							
if any, leading to the cause	D	Due to (or as a consequence of):						
UNDERLYING CAUSE	<b>【</b> c		D					
(disease or injury that		Due to (or as a consequence of):						
initiated the events resulting in death) LAST	<b>L</b> d							
PART II. Other significant conditi	ons contri	ibuting to death but not resulting in	the underlying	g cause given in PART I.		29a- WAS AN AUTOPSY P Yes Yes 29b- WERE AUTOPSY FINI	No	<u> </u>
						COMPLETE THE CAUSE C	P DEATH?	
30. MANNER OF DEATH  Natural Homicide  Accident Pending Investigation  Suicide Could not be determine		No. Unknown Not progress but progress within 42 days of death			1 year befo	Not pregnant, but pregnant 43 days to 1 year before death Unknown if pregnant within the past year		
33. IF TRANSPORTATION	3		b. TIME OF	34c.INJURY AT WORK	(? 34d. PLACE (	OF INJURY –at home, farm, str	eet, factory, office, bu	uilding, etc
INJURY, SPECIFY:  Driver/Operator		(Month Day Year)	INTIDV	Yes INO	/Snasify)			
Passenger								
	34	te. DESCRIBE HOW INJURY OCC	URRED	•	34f. LOCATIO	N OF INJURY (Street and Nu	mber, City or Town, S	State)
Pedestrian			_					
Other (Specify)								



#### **Tobacco Use**





# **Pregnancy Status**

32. IF FEMALE:	
Not pregnant within past year	Not pregnant, but pregnant 43 days to
Pregnant at time of death	1 year before death
Not pregnant, but pregnant within 42 days of death	Unknown if pregnant within the past year



# **Injury Details**

 In cases of natural death, leave blank; by definition there is no injury in a natural death

30. MANNER OF DEATH  Natural Homicide  Accident Pending Investigation	31. DID TOBACCO USE CONTRIBUTE TO D  Yes Probat	EATH?	Pregnant at time of dea	ath	Not pregnant, but pregnant 43 of 1 year before death	
■ Suicide ■ Could not be determined	d Ho Domino		Not pregnant, but preg	Harit Within 42 days of	r death	
33. IF TRANSPORTATION INJURY, SPECIFY: Driver/Operator Passenger	a. <b>DATE OF INJURY</b> (Month, Day, Year)	34b. TIME OF INJURY	34c.INJURY AT WORK?  ☐Yes ☐No	34d. PLACE OF INJ (Specify)	IURY –at home, farm, street, factory, office, l	ouilding, etc.
Pedestrian Other (Specify)	e. DESCRIBE HOW INJURY O	CCURRED		34f. LOCATION OF	INJURY (Street and Number, City or Town,	State)



An 80 year-old man was seen by a nurse practitioner two months ago for routine follow-up of his hypertension, diabetes mellitus, and chronic obstructive pulmonary disease. He was found dead at home without any signs of trauma, foul play, or drug overdose. Who should sign the death certificate?

- a. The nurse practitioner.
- b. The county medical examiner, as the death was unwitnessed.
- c. The county medical examiner, because the cause of death cannot be determined to a reasonable degree of medical certainty.
- d. The physician supervising the nurse practitioner.



Answer: d.

The physician supervising any health care extender providing the patient's care for the illness which results in death shall sign the death certificate.

In this case, the cause of death in part I could be listed as "hypertensive cardiovascular disease", with diabetes mellitus and chronic obstructive pulmonary disease listed in part II as other significant conditions.

	ises, injuries, or complications) that directly without showing the etiology. Enter only o	y caused the death. DO NOT enter terminal ever one cause on a line.	nts such as cardiac arrest,	Approximate intervar: Onset to death
IMMEDIATE CAUSE (Final disease or condition a. H' resulting in death)	YPERTENSIVE CARDIO	VASCULAR DISEASE (or as a consequence of)		YEARS
Sequentially list conditions, if any, leading to the cause listed on line a. Enter the		(or as a consequence of):		
UNDERLYING CAUSE (disease or injury that initiated the events resulting in death) LAST	Due to	(or as a consequence of):		
PART II. Other significant conditions contributions			29a WAS AN AUTOPSY PE	0
DIABETES MELLITUS; CH			29b. WERE AUTOPSY FIND COMPLETE THE CAUSE OF	
30. MANNER OF DEATH  Natural Homicide Accident Pending Investigation Suicide Could not be determined	31. DID TOBACCO USE CONTRIBUTE TO DEATH?  ☑ Yes ☐ Probably ☐ No ☐ Unknown	32. IF FEMALE: Not pregnant within past year Pregnant at time of death Not pregnant, but pregnant within 42 d	1 year before	t, but pregnant 43 days to e death oregnant within the past year



An elderly person complained of left-sided chest pain and tightness shortly before collapsing. She was transported to the emergency department, where she was pronounced dead. Her family relates a history of multiple myocardial infarctions and high cholesterol, which were confirmed by the staff at her local physician's office. Who should sign the death certificate?

- a. The patient's primary care doctor.
- b. The emergency room physician.
- c. The patient's cardiologist.
- d. Any of the above.



Answer: d.

The emergency room doctor, the patient's regular physician, or another physician who has treated the patient for the illness causing death (for example, a cardiologist) may sign the death certificate.

If none of these does so, the chief medical officer of the institution in which death is pronounced shall sign the death certificate (TCA 68-3-502).



I am a primary care physician in a small rural community. One of my longtime patients, an elderly man with multiple medical problems, has been found dead at home. I have not seen the patient in eight months. Who will sign the death certificate?

- a. The primary care doctor, even though it has been more than four months since the patient was last seen.
- b. The county medical examiner, as the patient had not been seen by the primary care doctor within four months.
- c. Either a or b may sign.



#### Answer: c.

The primary care physician, as the person most familiar with the decedent's medical history, is the most appropriate person to complete the death certificate. A physician treating a patient for the disease process accounting for death is obligated by statute to complete and sign the death certificate if the patient has been seen within the four months prior to death.

However, if the treating physician has not seen the patient in the four months before death, and the death occurs outside of a health care facility, the case may be referred to the county medical examiner in the county in which death occurred. The county medical examiner may then review medical records and issue the death certificate.



I am a pediatrician. I cared for an 8 year-old with profound developmental delays requiring mechanical ventilation who was found dead at home a few days after I diagnosed her with pneumonia. Who should sign the death certificate?

- a. The county medical examiner, as the pneumonia should have been resolving with appropriate therapy.
- b. The pediatrician.
- c. The decedent's neurologist, as the pneumonia was the result of developmental delays requiring mechanical ventilation.
- d. It depends on the underlying cause of the developmental delays.



Answer: d. It depends.

If the developmental delay is the result of a natural cause (for example, birth asphyxia resulting from a nuchal cord), the pediatrician or another physician attending to the patient will sign the death certificate.

If the developmental delay is due to a non-natural event (for example, remote abusive head trauma), the county medical examiner should be notified, as such a death is properly classified as homicide.



I am the medical director of a nursing home. I will be out of the country for two weeks on a medical mission trip. How should death certificates be handled in my absence?

- a. Sign multiple blank death certificates and leave them with the chief of nursing to complete.
- b. Another physician should be designated as the responsible party for death certification in the absence of the medical director.
- c. Any deaths occurring during the absence of the medical director may be certified on his or her return to the country.



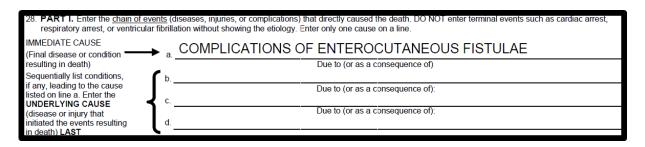
Answer: b.

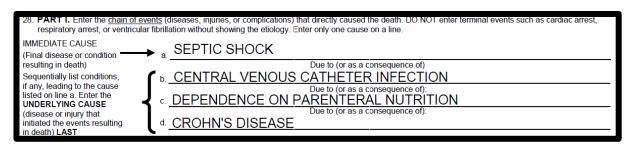
Do not sign blank death certificates. Your signature on the death certificate avers, "To the best of my knowledge, death occurred at the date and place, and due to the cause(s) and manner stated". The medical certification of death is to be completed within 48 hours of death.

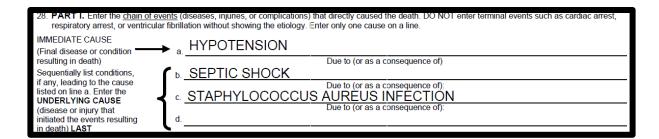
You must designate another physician to sign death certificates during your absence, just as you would for medical emergencies.



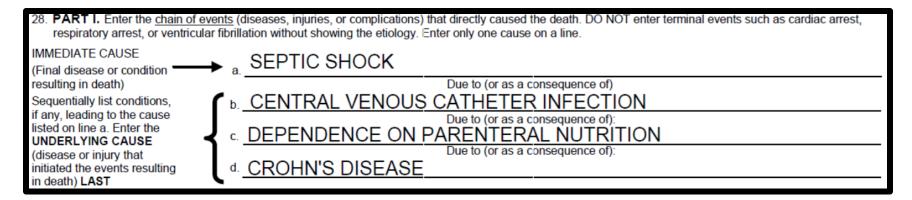
A patient was dependent on parenteral nutrition because of multiple enterocutaneous fistulae. She died in the intensive care unit after developing sepsis due to infection of an indwelling central venous catheter. Which cause of death certification is most appropriate?











The above classification of cause of death is precise, sequentially plausible, and lists a specific anatomic process, Crohn's disease, as the underlying cause of death.

"Complications of enterocutaneous fistulae", while technically correct, is incomplete without indicating the cause of the fistulae. "Hypotension due to septic shock due to Staphylococcus aureus infection" provides multiple mechanisms of death without listing a true cause of death.



#### Which of the following is an acceptable certification of death?

	(diseases, injuries, or complications) that directly caused the death. DO NOT enter terminal events such as cardiac arrest, fillation without showing the etiology. Enter only one cause on a line.	Approximate interval: Onset to death
IMMEDIATE CAUSE (Final disease or condition	a. HYPERTENSIVE CARDIOVASCULAR DISEASE	YEARS
resulting in death) Sequentially list conditions,	Due to (or as a consequence of) b. METABOLIC ACIDOSIS	HOURS
if any, leading to the cause listed on line a. Enter the UNDERLYING CAUSE	Due to (or as a consequence of): BLEEDING GASTROESOPHAGEAL VARICES	DAYS
(disease or injury that initiated the events resulting	Due to (or as a consequence of): d.	
in death) LAST		

		COMPLETE THE CAUSE OF	F DEATH? LIYES LINO
HYPERTENSIVE CARDIOVASCULAR DISEASE 29b. WERE AUTOPSY FIND		DINGS AVAILABLE: TO	
	ons contributing to death but not resulting in the underlying cause given in PART I.	29a. WAS AN AUTOPSY PE	
in death) LAST			
(disease or injury that initiated the events resulting	d. HEPATITIS B VIRUS INFECTION		YEARS
UNDERLYING CAUSE	Due to (or as a consequence of):		
listed on line a. Enter the			YEARS
Sequentially list conditions, if any, leading to the cause	BLEEDING GASTROESOPHAGEAL VARICES		DAYS
resulting in death)	Due to (or as a consequence of)		DAVE
(Final disease or condition	▶ a. METABOLIC ACIDOSIS		HOURS
IMMEDIATE CAUSE	METADOLIO ACIDOCIO		HOLIDO
28. PART I. Enter the <u>chain of events</u> (diseases, injuries, or complications) that directly caused the death. DO NOT enter terminal events such as cardiac arrest, respiratory arrest, or ventricular fibrillation without showing the etiology. Enter only one cause on a line.			Approximate interval: Onset to death



28. PART I. Enter the <u>chain of events</u> (diseases, injuries, or complications) that directly caused the death. DO NOT enter terminal events such as cardiac arrest, respiratory arrest, or ventricular fibrillation without showing the etiology. Enter only one cause on a line.	Approximate interval: Onset to death
IMMEDIATE CAUSE (Final disease or condition aMETABOLIC ACIDOSIS	HOURS
resulting in death)  Due to (or as a consequence of)  Sequentially list conditions,  b. BLEEDING GASTROESOPHAGEAL VARICES	DAYS
if any, leading to the cause listed on line a. Enter the UNDERLYING CAUSE  Due to (or as a consequence of):  CIRRHOSIS	YEARS
(disease or injury that initiated the events resulting in death) LAST  Due to (or as a consequence of):  HEPATITIS B VIRUS INFECTION	YEARS
PART II. Other significant conditions contributing to death but not resulting in the underlying cause given in PART I.  29a WAS AN AUTOPSY Yes	
HYPERTENSIVE CARDIOVASCULAR DISEASE 29b. WERE AUTOPSY FIR	

The cause-of-death statement above follows a logical sequence, lists the underlying disease process responsible for death last, and includes hypertensive cardiovascular disease as a contributory cause of death.

The alternative example reads, from top to bottom, "Hypertensive cardiovascular disease due to metabolic acidosis due to bleeding gastroesophageal varices", which implies that hypertension is the result of metabolic acidosis, and fails to indicate the etiology of the varices.



Which of the following is an acceptable certification of death?

		ases, injunes, or complications) that directly a without showing the etiology. Enter only or	caused the death. DO NOT enter terminal even ne cause on a line.	ts such as cardiac arrest,	Approximate interval. Onset to death
IMMEDIATE CAUSE (Final disease or condition resulting in death) Sequentially list conditions,	a. <u>C</u> (	OMPLICATIONS OF MUL	TIPLE SCLEROSIS or as a consequence of)		YEARS
if any, leading to the cause listed on line a. Enter the UNDERLYING CAUSE (disease or injury that initiated the events resulting in death) LAST	c		or as a consequence of):		
PART II. Other significant condition	ns contribu	uting to death but not resulting in the underl	lying cause given in PART I.	29a- WAS AN AUTOPSY PE Yes N. 29b. WERE AUTOPSY FIND COMPLETE THE CAUSE OF	INGS AVAILABLE: TO
30. MANNER OF DEATH  Natural Homicide  Accident Pending Investi	-	31. DID TOBACCO USE CONTRIBUTE TO DEATH?  Yes Probably No Unknown	32. IF FEMALE:  Not pregnant within past year  Pregnant at time of death  Not pregnant, but pregnant within 42 death	Not pregnan 1 year before	t, but pregnant 43 days to

28. PART I. Enter the chain of events (diseases, injuries, or complications) that directly caused the death. DO NOT enter terminal events such as cardiac arrest, respiratory arrest, or ventricular fibrillation without showing the etiology. Enter only one cause on a line.	Approximate interval: Onset to death
IMMEDIATE CAUSE (Final disease or condition ————————————————————————————————————	DAYS
resulting in death)  Sequentially list conditions,  Due to (or as a consequence of)	32 YEARS
If any, leading to the cause listed on line a. Enter the UNDERLYING CAUSE  C. GUNSHOT WOUND TO TORSO, REMOTE	32 YEARS
(disease or injury that initiated the events resulting in death) LAST	
PART II. Other significant conditions contributing to death but not resulting in the underlying cause given in PART I.  29a- WAS AN AUTOPSY PE	
29b. WERE AUTOPSY FINDI COMPLETE THE CAUSE OF	INGS AVAILABLE: TO DEATH? Yes No
□ Accident □ Propring Investigation □ Yes □ Probably □ Pregnant at time of death □ 1 year before	t, but pregnant 43 days to e death pregnant within the past year



<ol> <li>PART I. Enter the <u>chain of events</u> ( respiratory arrest, or ventricular fibrill</li> </ol>	Approximate interval: Onset to death	
IMMEDIATE CAUSE (Final disease or condition a.	COMPLICATIONS OF MULTIPLE SCLEROSIS	YEARS
resulting in death) Sequentially list conditions.	Due to (or as a consequence of)	
if any, leading to the cause listed on line a. Enter the	Due to (or as a consequence of):	
UNDERLYING CAUSE (disease or injury that initiated the events resulting d.	Due to (or as a consequence of):	
in death) LAST		
PART II. Other significant conditions co	ntributing to death but not resulting in the underlying cause given in PART I. 29a⋅ WAS AN AUTOPSY PER   29a⋅ WAS AN AUTOPSY PER  29a⋅ WAS AN AUTOPSY PER  29a⋅ WAS AN AUTOPSY PER	
	29b. WERE AUTOPSY FINDIN COMPLETE THE CAUSE OF	NGS AVAILABLE TO
30. MANNER OF DEATH  Natural Homicide  Accident Pending Investigation	Yes Probably Pregnant at time of death 1 year before o	but pregnant 43 days to death
Suicide Could not be determ	ined Not pregnant, but pregnant within 42 days of death	,,

If the precise physiologic mechanism of death is unclear, it is acceptable to use the term "complications of" a known disease process which could reasonably account for death.

Although "urosepsis due to paraplegia due to gunshot wound to torso, remote", is an accurate and specific cause of death, the manner of death cannot be considered natural, and the case should be referred to the county medical examiner. The interval of time elapsed between the injury and death does not affect or change the manner of death.





#### **THANK YOU**